



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,513	05/11/2004	Klaus Frohlich	A91988	3512
30008	7590	09/08/2005	EXAMINER	
GUDRUN E. HUCKETT DRAUDT LONSSTR. 53 WUPPERTAL, 42289 GERMANY			KENNEDY, JOSHUA T	
			ART UNIT	PAPER NUMBER
			3679	

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/709,513

Applicant(s)

FROHLICH, KLAUS

Examiner

Joshua T. Kennedy

Art Unit

3679

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 5/11/04 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Handwritten signature or initials.

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10/709,513, filed on 11/01/2004.

Claims 1-13 have been examined.

Drawings

The drawings are objected to because there is no L1 or L2 as listed in the specification in Figure 7, nor is there an L3 or L4 listed in the specification in.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

Art Unit: 3679

Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 1 is objected to because of the following informalities: In line 3 of Claim one "bars ends" should be -- bar ends --. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 raises the question of whether the combination or subcombination is being claimed. In particular, claim 1 sets forth a device having the intended use of connecting bar ends of bars. However, claim 2 then positively includes the bar ends (note line 2). Accordingly, are bar ends a required part of the connecting device or not? Appropriate correction is required. This also applicable to Claim 13 which seeks to further define an element, i.e., the bars, that is purportedly not a required element of the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 7-10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holdsworth (US Patent 5,909,980) in view of Reiland (US Patent 3,340,667).

As to Claim 1. Holdsworth discloses a device for connecting bar ends, the device comprising:

a pipe section (112) for receiving bar ends of bars to be connected;
clamping elements (142) each having an outer thread;
wherein the pipe section has threaded bores (137) in which the clamping elements are secured by being screwed in; and
wherein the clamping elements are arranged in a first row (Fig 10);

However, Holdsworth does not disclose a second row on the same side of the pipe section relative to a circumference of the pipe section nor the clamping elements of the first row being staggered relative to the clamping elements of the second row in a longitudinal direction of the pipe section.

Reiland teaches a sleeve structure used as a compression splice to connect two bars having apertures (51,55) in the sleeve (38) that are staggered in two rows on the

Art Unit: 3679

same side of the pipe section relative to the circumference (Fig 6) "for passageways through which concrete grout... flows into the sleeve... These segments function as key-like interlocks to transmit compressive and/or tensional stresses from one or the other of the bars to the sleeve." (Col 5, Line 65-75 Col 6, Line 1-17). Reiland is evidence of the recognition of those of ordinary skill in the art of providing staggered rows per se. Accordingly, it would have been obvious to one of ordinary skill in the art to provide Holdsworth with multiple rows of staggered of apertures as taught by Reiland to transmit compressive/ tensional stresses from the bars to the sleeve through the use of an increased number of locking screws through threaded apertures. Note that the duplication of a feature to attain a duplicative result is not inventive in the patentable sense.

As to Claim 2. Holdsworth in view of Reiland disclose the clamping elements (142) having ends facing the bar ends and wherein the ends of the clamping elements act in different directions onto the bar ends (Fig 10).

As to Claim 3. Holdsworth in view of Reiland disclose the threaded bores (137) and the clamping elements of the first row having the first longitudinal axes and wherein the threaded bores and the clamping elements of the second row have second longitudinal axes, wherein the first and second longitudinal axes are arranged at an angle of less than or equal to 60 degrees relative to one another (Reiland, Fig 6).

Art Unit: 3679

As to Claim 4. Holdsworth in view of Reiland illustrate the angle being approximately 30 degrees (Reiland, Fig 6).

As to Claim 5. Holdsworth in view of Reiland the threaded bores and the clamping elements of the first row having first longitudinal axes and wherein the threaded bores and the clamping elements of the second row have second longitudinal axes (Reiland, Fig 6), wherein the first and second longitudinal axes are at least approximately parallel to one another and are positioned in a plane laterally displaced relative to a diameter of the pipe section, respectively.

As to Claim 7. Holdsworth in view of Reiland as advanced above result in the clamping elements of the first row each being positioned between two of the clamping elements of the second row, respectively (Reiland, Fig 6).

As to Claim 8. Holdsworth in view of Reiland disclose a transverse element (138), arranged at least approximately at a longitudinal center of the pipe section.

As to Claim 9. Holdsworth in view of Reiland disclose that the transverse element projects diametrically through the pipe section and is a clamping pin or a groove pin (Fig 10).

Art Unit: 3679

As to Claim 10. Holdsworth in view of Reiland disclose that each section of the pipe section that receives a bar end has at least one clamping screw that, relative to the circumference of the pipe section, is positioned essentially opposite the clamping elements of the first and second rows (Reiland, Fig 8).

As to Claim 13. Holdsworth in view of Reiland disclose the bars to be connected being reinforcement bars used in concrete construction (Holdsworth, Col 2, Lines 7-14).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holdsworth in view of Reiland as applied to claims 1-5, 7-10, and 13 above, and further in view of Ecklesdafer (US Patent 5,154,652).

As to Claim 6. Holdsworth in view of Reiland teach the bar connection as claimed but do not disclose that a longitudinal edge of the threaded bores is positioned at least approximately on a tangent of an inner pipe wall surface of the pipe section.

Ecklesdafer teaches a shaft coupling having a sleeve with a shaft inserted and where two "elongated fasteners tangentially engage... opposing sides of each shaft to prevent longitudinal displacement of the shafts relative to one another" (Col 2, Lines 17-21). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the bar connection of Holdsworth in view of Reiland to have clamping elements that tangentially engage the opposing sides of each shaft as taught by Ecklesdafer to prevent longitudinal displacement of the shafts relative to one another.

Art Unit: 3679

Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holdsworth in view of Reiland and Ecklesdafer as applied to claim 6 above, and further in view of Mochizuki (US Patent 5,974,761).

As to Claim 11. Holdsworth in view of Reiland and Ecklesdafer disclose the bar connection as claimed but do not disclose each section of the pipe section that receives a bar end having at least one transverse pin that extends at least approximately at a right angle to a longitudinal axis of the pipe section and is arranged in immediate vicinity of an inner pipe wall.

Mochizuki teaches a splice sleeve from reinforcing bars similar to the bar connection as disclosed having a taper pin and corresponding hole adaptable to be used in conjunction with the sleeve of Holdsworth in view of Reiland and Ecklesdafer that is tangential to the reinforcing bar "to fasten the reinforcing bar to the supporting projections" (Col 2, Lines 45-49). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the sleeve of Holdsworth in view of Reiland and Ecklesdafer to have the hole and pin as taught by Mochizuki to fasten the reinforcing bar to the clamping projections.

Art Unit: 3679

As to Claim 12. Holdsworth in view of Reiland, Ecklesdafer, and Mochizuki disclose the at least one transverse pin is a groove pin or a clamping pin (33,34) and is comprised of hardened material.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 4,142,811 to Burnham cited to show a hub for receiving a shaft that is secured by clamping elements being tangent to the shaft.

US Patent 4,666,326 to Hope cited to show a reinforcing bar coupling system having clamping elements on either side of the reinforcing bar to secure it within the sleeve.

US Patent 6,530,716 to Grimmel cited to show a connection for shafts having clamping elements on all sides of the shaft to secure it in place.

US Patent 4,035,098 to Griffen cited to show a connection for shafts having 3 clamping elements on the same side of the shaft to secure it in place.

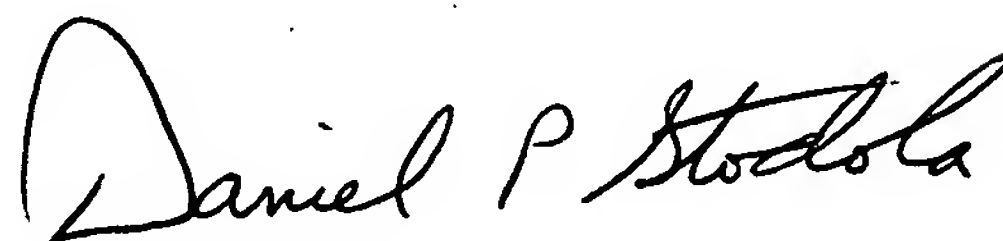
US Patent 3,473,285 to Reiland cited to show a reinforcing bar coupling system having staggered holes on either side of the reinforcing bar to secure it within the sleeve.

Art Unit: 3679

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua T. Kennedy whose telephone number is (571) 272-8297. The examiner can normally be reached on M-F: 7am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached on (571) 272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JTK
8/24/05

DANIEL P. STODOLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600